# TIGER

Topological Integrated Geographic Encoding & Referencing System





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# Introduction

#### INTRODUCTION

The TIGER/ZIP file is created by matching the information contained on the Census Bureau's TIGER file to the United States Postal Service's ZIP+4 National Directory. The result is a file of over 20 million data records from more than 21,000 five-digit ZIP Codes, which relate ZIP Codes to state, county, Standard Metropolitan Statistical Areas (SMSA) codes, tract number, block number, and geographic coordinate information. Coverage of the file is limited to the address ranges in the National ZIP+4 file that could be successfully matched to the address ranges in the Census Bureau's TIGER file.

While there has been a careful attempt to match the address data in these files to create this product, the United States Postal Service makes no representations or warranties, expressed or implied, as to the accuracy, merchantability, fitness for any particular purpose, or otherwise with respect to the TIGER/ZIP product, nor shall the United States Postal Service be liable for any special, incidental, or consequential damages, even if it has been, or is hereafter, advised of the possibility of such damages that may result from the usage of the data contained in the TIGER/ZIP product.

#### TIGER Media Configuration Option

The TIGER/ZIP file is available in five tape formats and on CD-ROM. Data on the tape products is arranged in ZIP Code sequence, while CD-ROM data is arranged by state and county. The standard configuration is 9-track tape, 6250 BPI, EBCDIC. Each tape reel or cartridge is a single, unique file which contains a copyright record followed by detail records. The five available configuration options are described below:

Format	Recording Technique	Character Set	Density	Label Option	Records Per Tape Volume
А	9-Track	EBCDIC	6250	No Labels	2,000,000
В	9-Track	ASCII	6250	No Labels	2,000,000
С	9-Track	EBCDIC	1600	No Labels	579,000
D	9-Track	ASCII	1600	No Labels	579,000
E	18-Track	EBCDIC	38K	No Labels	2,600,000
F	CDROM (ISO)	ASCII			

Tapes and cartridges are available with the following attributes:

Record length	=	75
Blocksize	= 3	2,700
Records per block	=	436

CD-ROMS are available with the following attributes:

# FILE DESCRIPTION

#### **HEADER RECORD**

The first record on the tape or cartridge of the TIGER/ZIP file is a copyright record consisting of 5 spaces, a file date, the copyright statement, and the tape sequence number. The components of these records are illustrated below:

Note: The copyright record does not appear in the data files on the CD-ROM media.

#### COPYRIGHT HEADER RECORD

Field Sequence Number	Field Description	Logical Length	Relative Position From/Thru	Content Notes
1	Filler	05	01 05	Spaces
2	File Version Year	02	06 07	00 – 99
3	File Version Month	02	08 09	01 – 12
4	Copyright Symbol	11	10 20	©USPS
5	Tape Sequence Number	03	21 23	001 – 255
6	Filler	52	24 75	Spaces

#### COPYRIGHT HEADER RECORD - COBOL EXAMPLE

BLOCK CONTAINS 0 RECORDS.

LABEL RECORDS ARE STANDARD.

RECORD CONTAINS 75 CHARACTERS.

DATA RECORDS ARE COPYRIGHT-HEADER-RECORD.

# 01 COPYRIGHT-HEADER-RECORD.

05	FILLER	PIC X(5).
05	FILE-VERSION-YEAR	PIC X(2).
05	FILE-VERSION-MONTH	PIC X(2).
05	COPYRIGHT-SYMBOL	PIC X(11).
05	TAPE-SEQUENCE-NO	PIC X(3).
05	FILLER	PIC X(52).

# TIGER FILE

Field Sequence Number	Field Description	Logical Length	Relative Position From/Thru	
1	ZIP Code	5	001	005
2	ZIP Add-On	4	006	009
3	Carrier Route	4	010	013
4	State	2	014	015
5	County Code	3	016	018
6	Basic Tract Number	4	019	022
7	SUF Tract Number	2	023	024
8	Block Number	4	025	028
9	From Latitude	9	029	037
10	From Longitude	10	038	047
11	To Latitude	9	048	056
12	To Longitude	10	057	066
13	PMSA Code	4	067	070
14	CMSA Code	4	071	074
15	Multiple Match Indicator	1	075	075
Note:	On the CD-ROM there is on	ne additional	field:	
16	CR/LF	2	076	077

# RECORD - COBOL EXAMPLE

BLOCK CONTAINS 0 RECORDS LABEL RECORDS ARE STANDARD RECORD CONTAINS 75 CHARACTERS RECORDING MODE IS F DATA RECORDS ARE TIGER-MASTER-REC.

# 01 TIGER-MASTER-REC.

05	ZIP-CODE	PIC X(5).
05	ZIP-ADD-ON	PIC X(4).
05	CARRIER-ROUTE	PIC X(4).
05	STATE	PIC 9(2).
05	COUNTY-CODE	PIC 9(3).
05	TRACT-NUMBER.	
	10 BASIC	PIC X(4).
	10 SUF	PIC X(2).

# FILE DESCRIPTION

05	BLOCK-NUMBER	PIC X(4).
05	LONG-LAT.	
	10 FROM-LATITUDE	PIC X(9).
	10 FROM-LONGITUDE	PIC X(10).
	10 TO-LATITUDE	PIC (9).
	10 TO-LONGITUDE	PIC X(10).
05	PMSA-CODE	PIC X(4).
05	CMSA-CODE	PIC X(4).
05	MULTIPLE-MATCH-IND	PIC X(1).
	88 MATCH-MULTIPLE	VALUE 'Y'.
	88 SINGLE	VALUE ' '.

# ZIP+4 Code

# TIGER.DAT FILE

Field Sequence Number	Field Description	Logical Length	Relative Position From/Thru	
1	State Code	2	001	002
2	ZIP Add-On	2	003	004
3	Carrier Route	3	005	007
4	State	25	800	032
5	County Code	2	033	035

# DATA ELEMENT DEFINITIONS

**ZIP:** A five-digit code that identifies a specific geographic delivery area. ZIP Codes can represent an area within a state, an area which crosses state boundaries (unusual condition), or a single building or company that has a very high mail volume. *ZIP* is an acronym for Zone Improvement Plan.

+4: A +4 describes the last four positions of a ZIP+4 Code. Most delivery addresses are assigned a single ZIP+4 Code. However, large companies may be given a range of ZIP+4 Codes that can be used to route mail to a specific department.

#### **CARRIER ROUTE**

Carrier identification code or number for a given delivery route or PO Box presentation.

#### STATE CODE

A two-digit code assigned by the Census Bureau.

#### **COUNTY CODE**

The three-digit Federal Information Processing Standard (FIPS) code assigned to counties and county equivalents in sequence within each state.

#### TRACT NUMBER

Small, locally delineated statistical areas within selected counties, generally having stable boundaries and, when first established by local communities, designed to have relatively homogeneous demographic characteristics.

#### **BLOCK NUMBER**

Blocks are numbered uniquely withing each census tract with a three-character number that identifies the collection block used in the census, and a character block suffix. This character block suffix is often blank.

#### FROM LATITUDE

The north-south measurement indicating the beginning point of the address.

#### FROM LONGITUDE

The east-west measurement indicating the beginning point of the address.

#### To LATITUDE

# DATA ELEMENT DEFINITIONS

A north-south measurement indicating the ending point of the address.

#### To Longitude

The east-west measurement indicating the ending point of the address.

# PRIMARY METROPOLITAN STATISTICAL AREA (PMSA)

A four-digit code assigned to areas that make up one or more counties including a large population nucleus and nearby communities that have a high degree of interaction.

# CONSOLIDATED METROPOLITAN STATISTICAL AREA (CMSA)

A four-digit code assigned to areas that consists of primary metropolitan statistical areas.

#### MULTIPLE MATCH INDICATOR

The ZIP+4 Code matched with more than one census block/latitude/longitude is identified with a multiple match indicator, which would be 'Y' if the condition occurred.

Multiple matches can occur because:

- 1. The Census Bureau reported the same block with different latitude/longitude.
- 2. The ZIP+4 block face was in more than one census block due to coding convention differences between the Census Bureau and the United States Postal Service.
- 3. Ambiguous data exists in either the Census TIGER/ZIP File, ZIP+4, or both.

#### CR/LF

This field only appears in the "txt" files on the CD-ROM and is used to delimit the records.